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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,710	11/30/2000	Takashi Hasegawa	P/1071-1233	1866

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Keating & Bennett, LLP
10400 Eaton Place, Suite 312
Fairfax, VA 22030

EXAMINER

BETTENDORF, JUSTIN P

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 03/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/726,710

Applicant(s)

HASEGAWA, TAKASHI

Examiner

Justin P. Bettendorf

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/4/03 has been entered.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohira JP 07-131209 (of record) in view of Okada et al. EP 0 903 801 A2.

As noted in paper no. 13, the Ohira reference discloses in figures 5 and 6 a non-reciprocal circuit device comprising a plurality of central conductors overlapping and intersecting each other on a magnetic member 6 and a solenoid-shaped inductor coil 9 having offset terminals that inherently generates a magnetic field perpendicular to the direction of the DC field from permanent (i.e. "DC") magnet 7 because the field from the solenoid follows the axis of the solenoid. With respect to claim 2, figure 6 shows the capacitor 10 connected in series with the inductor 9 thereby forming an inherent bandpass filter because a capacitor and inductor connected in series always forms a bandpass filter centered at the resonant frequency. With respect to claim 4, the Ohira reference discloses the device is for a cell phone (see [0002] of the attached translation). With respect to claim 5, figure 6 shows the solenoid 9 having an axis

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adjacent to the central plane of the magnetic member (i.e. wherein "adjacent" is understood to mean "nearby"). The longitudinal axis of the coil 9 is shown as being parallel to the edge of the housing 3 and circuit boards 5, 8. However, the reference shows a disk-shaped ferrite and not a rectangular ferrite.

The Okada et al. reference discloses in figure 7 a rectangular-shaped ferrite 12 that is art-recognized equivalent to a disk-shaped ferrite (see [0046]-[0048]). The ferrite 12 is oriented such that its edge is in parallel to the edge of the housing yoke 5 and edge of the substrate 3.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have substituted the art-recognized equivalent rectangular-shaped ferrite of Okada et al. in place of the disk-shaped ferrite in the non-reciprocal device of Ohira such that the edges of the ferrite aligned with the housing and substrate thereby aligning with the longitudinal axis of the coil inductor because such a modification would have been considered a mere substitution of art-recognized equivalent ferrite shapes.

4. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al. (of record) in view of Ohira (of record) and Okada et al. EP '801.

The Maeda et al. reference discloses in figure 5 a non-reciprocal circuit device with overlapping, intersecting central conductors 21-26 on a magnetic member 31 with a DC magnetic field applied perpendicularly thereto (see claim 1 of Maeda et al.). Figure 6 shows a non-reciprocal circuit that includes a bandpass filter of a series inductor 62 and capacitor 61 (with respect to claim 2), and figure 9 shows a low pass filter that includes capacitors 65, 67 on either side of inductor 66 (with respect to claim 3). The reference further that the inductors may

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be formed by a coiled wire (i.e. a solenoid - see col. 8, lines 42-43) but does not disclose the coiled wire's orientation.

As noted above, the Ohira/Okada et al. combination suggests a non-reciprocal circuit device with a solenoid shaped inductor 9 having offset terminals orientated such that the field generated is perpendicular to the magnetic field generated by the permanent magnet 7 with an axis that is adjacent the central plane of the rectangular ferrite magnetic member that has the axis of the longitudinal axis of the coil in parallel with the edge of the ferrite member.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have substituted the solenoid coil inductor and orientation thereof including the rectangular ferrite of Ohira/Okada et al. in place of the generic solenoids of Maeda et al. because, as the Maeda et al. reference is silent on the orientation and specifics of the solenoid inductor, any art-recognized equivalent solenoid inductor would have been usable therewith such as the one disclosed by Ohira. Moreover, the substitution of the rectangular ferrite of Okada et al. would have been considered a mere substitution of art-recognized equivalent ferrite shapes.

With respect to claim 4, it should be noted that the use of a non-reciprocal device in a communication device would have been obvious because that use is a conventional use of the non-reciprocal device (see Ohira [0001] and [0002]).

Response to Arguments

5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

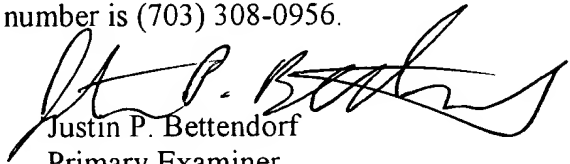
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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin P. Bettendorf whose telephone number is (703) 308-2780. The examiner can normally be reached on 6:00-3:30 (M-F, 1st Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on (703) 308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Justin P. Bettendorf
Primary Examiner
Art Unit 2817

jpb
March 18, 2003